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Construction Bulletin

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CEMP-C

Subject: Landscape Planting

Applicability: INFORMATION

1. The United States is a large, diverse land mass. Diverse in architectural style, population, and lifestyle as well as climate and landscape. The Corps of Engineers constructs facilities throughout these United States from the arid Southwest to the inhospitable frozen north lands. In all of these locations, the facilities we construct are usually landscaped with installed plant material to some extent. However, the types of turf and plants that will survive and thrive; the periods during which they may be planted with a high probability of survival; and the care they require in their establishment period vary widely in these diverse locations.
2. Within the Corps of Engineers Guide Specification system are found two main specifications for landscape planting; CEGS 02935, Turf, and CEGS 02950, Trees, Shrubs, Ground Covers, and Vines. It is the intent for these specifications to be used as a guide with the appropriate and proper types of turf, soil treatments and planting periods for the geographical location of the facility to be inserted by the specification writer during facility design. Methods of planting, protection, and establishment indigenous to the geographic locality are also inserted into the specifications during the design process. Types of trees, shrubs, etc., listed in both their scientific and common names as well as the planting locations of these items and the location of turfing are typically shown on the landscape planting plans.
3. It is important to note that the feature which separates landscape planting from all other construction features of the facility is that we are dealing with living botanical organisms which must be appropriate for the geographical location and collected, transported, installed, maintained and succored in such a manner as to sustain this life. If all of the preceding are not accomplished, it is not likely the plantings will survive. It is an unfortunate fact, in many instances, that both we and our contractors have historically not placed the proper emphasis on our landscape planting efforts. This has resulted in our contractors not allocating sufficient resources to the landscaping work items. Subcontracts have been negotiated which did not contain sufficient monies to accomplish the specified work. All too often we have accepted landscape planting efforts which have consisted of inadequate soil preparation, careless planting of trees and shrubs, little or no post-planting maintenance to establish them during the maintenance period, and no post

completion inspection of the landscaping to ensure that the plantings and turf which did not survive are replaced. We must ensure our contractors know upfront that we expect conformance with the letter and spirit of the contract documents in our landscape planting efforts. A conscientious quality control manager and a prudent quality assurance manager will make a visit to the landscaper's nursery a part of the Preparatory Control Phase to check the size and condition of the proposed trees and shrubs. The care required during shipment to the site and the care that they will receive at the site prior to planting should be discussed in detail. If the plants are dead or dying before they are planted, the act of planting will not bring them back to life! Discuss in detail the required soil testing and soil amendements indicated as a result of this testing. If you are not sure as to what the test results indicate, consult your landscape professional. Placing plants in an inhospitable environment guarantees failure.

4. During the biddability, constructability, operability and environmental (BCOE) review process the contract duration listed should be checked to ensure that the landscape planting seasons listed in the contract realistically coincide with probable contract completion date or that period when the landscape planting will likely be accomplished. If not, a review comment to this effect should be made. It is important to check to ensure that the types of plantings shown and specified are of a type appropriate for the project location particularly if the design is accomplished by other than the geographic district under customer choice or similar circumstances. It is also important if the project has been site adapted from a like project in another geographical location, or if the design architect/engineer selected is from another geographical location.

5. At the start of construction, it is incumbent upon us as prudent construction managers, as a part of the review of the contractor's network analysis system, to ensure the contractor has apportioned sufficient financial resources to the landscape portion of the project. During construction, we must also monitor the contractor's progress against the schedule to ensure that the contractor's current progress is satisfactory to permit the installation of the turf and plant material during the specified planting season within the original or adjusted contract duration. If not, remedial action is required. A prudent construction manager will also examine all contract actions with requests for time extensions including extensions for unusually severe weather to see if, when they are inserted into the contractor's schedule, they extend the landscape planting late start date in the schedule past the specified planting season. When this happens it is often possible, in our partnering atmosphere, to assist in revising the logic in the contractor's schedule to allow the planting to begin earlier thus coinciding with the specified planting season. This mitigates delay costs, allows the contractor to finish earlier and permits the user to occupy a completed facility earlier as well as permitting us to effect timely financial closeout. It should be noted at this point that the contractor usually schedules the landscaping portion of his project at the very end of the construction period. However, given the restraints of the planting season, it is best to plant trees and shrubs and establish turf as soon as the project is at a stage of completion that the landscaping can be started without danger of damage by subsequent construction operations. Landscape planting can be started as soon as the work can be protected from damage by the performance of the remaining construction on the project. This would include the exterior work on the structure and also completion of work on buried utilities, paving, sidewalks, etc. Another reason for the

importance of accomplishing the landscape planting as soon as possible is because the prime contractor and the quality assurance personnel will still be manning the site on a daily basis during at least part of the establishment period.

6. The planting season specified in the contract affords the optimum time for the establishment of landscape planting in the project location. However, in much of the area in which the Corps does work, it is possible to establish plants and turf outside of these specified periods with the expenditure of some additional work and protective measures. For example, turfing may be established in the southeastern region of the U.S. in the summer season if it is properly mulched and additional watering is provided. Trees and shrubs will root and establish themselves anytime the ground temperature is above 40 degrees F (5 degrees C) in those areas in which the ground temperatures generally exceed 40 degrees F. When it appears that beneficial occupancy of a facility might have to be accepted without landscaping, it may be prudent to explore the potential of establishing landscape plants and turf outside of the specified period. However, a decision to modify the contract documents to plant outside of the planting season should not be made without the advice of a trained horticulturist or landscape professional. It is recommended that the assistance of this type of professional be obtained for the preparatory and initial phases if planting outside of the planting season is indicated. It is also suggested that the services of a like professional be obtained concerning contractor requests for substitutions on trees, shrubs and turf. Substitutions also require coordination with both the designer and the customer. At times substitutions are indicated and will provide plantings which accomplish the desired effect, but only someone familiar with the values and characteristics of the individual plants as well as the project background familiarity as to the rationale for the design selection for a particular shrub or tree will have this knowledge. We must also remember that a specific plant or tree listed in the contract documents may represent a specific customer preference or a restraint created by the facility occupancy and a change would result in customer dissatisfaction or loss of function.

7. The first impression that someone has about quality upon arriving at a new facility is often determined by the visual appearance of its landscaping, particularly the appearance of the installed plant material. Commercial builders and developers know the value of visually attractive landscapes and use well planned plantings to sell facilities. In today's all-volunteer army, the importance of the quality of life, and how it is perceived, contributes materially to soldier retention. In short, do not view landscaping and landscape planting as an item of work that occurs at the end of the project and is a necessary evil that is not really materially a part of the project. Be familiar with your contract requirements, and use the services of a landscape professional when revisions are required or when you are not sure of the contract requirements. Ensure that the contract requirements are met. We are particularly deficient in assuring that the establishment and maintenance portions of the landscape planting requirements are met. Remember that turf and plants are living organisms. When something such as watering or protection is forgotten or postponed, the damage can often only be repaired by replanting. When we must replace plant material, the growth period starts all over again with an attendant delay in facility completion.

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8. A non-traditional training course titled Quality Verification: Landscape Planting (Course #755) has recently been produced by the Huntsville Training Division to assist quality assurance personnel.


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